

REMARKS

I. Status of the Claims

Claims 1, 2, 4, 9, 10, 12 and 59-66 are pending in the application. Claims 1, 9 and 59 are independent claims. Claims 3 and 11 have been cancelled. Claims 1, 4, 9 and 12 have been amended to more clearly define the invention. Claims 59-66 are new claims. No new matter has been added.

In an Advisory Action dated May 23, 2003 amended claims 1, 2, 4, 9, 10, and 12 were not deemed to place the application in condition for allowance for "reasons of record." The amended claims were not entered.

Applicants submit that several of the claim limitations in the amended claims 1, 2, 4, 9, 10 and 12 have not been addressed on the record. Applicants' remarks pertaining to those claim limitations submitted with the Amendment After Final have not been considered. Entry and consideration of the amended claims is respectfully requested. In addition, Applicants have drafted claims 59 to 66 after careful consideration of the Examiner's remarks and submit that these claims are also allowable over the art of record for the reasons set forth below.

New claim 59 requires that the individual recesses have a curved shape corresponding to the shape of the edible pieces. This limitation finds support in the specification at least at page 25, lines 12-13; page 32, lines 19-20; and page 33, lines 25-29. As disclosed in the specification, the shape of the recess aids in holding the edible piece in registration, preventing yawing and skewing of the piece between printing stations. (See page 25, line 17). In contrast, Ream discloses flat "recesses" to accommodate flat

pieces, and these spaces do not provide any registration function. In fact, they are larger than the sheets to be printed on. Thus, to the extent that Ream discloses the ability to print multicolor images on edibles, it is only possible because the gum sheets are flat and have a surface which provides adherence to the ink image.

Redford does not disclose two printing stations. The second "operation" on the tablet as the Examiner calls it, is a non-contact etching step. Thus, the problems associated with adhering a second image are not addressed. Therefore, in addition to the reasons discussed above, providing a curved recess to hold an edible piece in registration between two printing stations is considered to render the invention of claim 59 patentable over the cited references.

Dependent claim 62 requires a non-planar sugar shell printing surface, such as can be found on Skittles® Bite Size Candies or M&M's® Milk Chocolate and Peanut Chocolate Candies. Support for this limitation is found at page 11, line 28. Such sugar shell confectionery items are more difficult to hold in registration and to print on than the chewing gum sheets disclosed in Ream.

Dependent claim 63, which depends from claim 61 recites a lentil shaped piece of a given size and specifically recites the tolerance of the registration of two printed images. (See page 18, lines 3-27). This claim is distinguished from Redford which describes a printed background shape into which an image is etched. Redford clearly does not recognize the tolerance required to register two components of a composite image. This claim also distinguishes over the combination with Ream which discloses only flat substrates.

Dependent claim 64 specifically recites that each printing station uses a contact member (such as an offset roller). Support for this claim limitation is found, for example, at page 20, lines 17-20. This is proposed as a further distinction over Redford which expressly teaches that the second "operation" (to use the term from the Office Action) is a non-contact etching step.

Dependent claim 65 recites that the non-planar printing surface of the edible piece protrudes above the transport surface. This limitation finds support in the specification in the paragraph bridging pages 25 and 26 and is believed to distinguish the present invention over both Ream and Redford and any combination thereof.

Amended claim 1 (and in fact all of the claims) requires that the printing surface on the edible substrate is non-planar and that the image is a multicolor registered image. Applicants submit that none of the cited references alone or in combination teaches or renders obvious printing registered images on non-planar surfaces of an edible substrate.

The previous Office Action (Paper No. 12) indicated that "even if the claims were amended to impart some curved or non planar shape to the shaped piece, applicants are not the first to print on curved pieces and they are not the first to perform a dual operation on curved pieces." (Emphasis added). Whether or not this statement is correct, the prior art of record in this application does not disclose printing multicolor registered ink images or maintaining registration of two-component images on non-planar substrates.

Ream discloses printing multicolor images on flat substrates. For example, at page 6: "For each product there is a package containing one or more generally

flat, rectangular chewing gum pieces. . ." The description at page 9 recites: "a flat rectangular sheet of a chewing gum." Nothing in Ream suggests that the other food items mentioned at page 6 (taffy, gummy candy, and dehydrated fruit based confections) would have anything other than a flat printing surface. Nor is there any support for the statement in the Office Action that such items are "usually not slab shaped." Moreover, the apparatus disclosed in Ream does not appear to be capable of handling anything other than sheets.

Ream also does not hold pieces in a recess in registration. The recesses in which the gum sheets are placed are larger than the sheets (Ream, page 9), and as the sheets are conveyed through the apparatus, a guide rail 69 slides the sheets on the conveyor bed to align them for printing (Ream, page 16). Thus, although Ream discloses multicolor printing, the disclosure is limited to flat pieces and does not disclose holding the pieces in registration in a recess. If a vacuum were placed underneath the conveyor to remove starch dust, as contemplated at page 20 of Ream, it would be applied between the slats 52 of the conveyor. However, it would not tend to hold the pieces in registration and there is no indication in Ream that the vacuum is provided for that purpose.

Redford does not disclose two printing stations and noting that it discloses two "operations" is beside the point. Redford was cited in the Office Action for the proposition that it is known to hold pieces in registration between printing stations. However, the entire thrust of Redford is to avoid the use of offset printing to form complex images. Redford claims that offset printing on tablets causes problems such as smudging, fading and inaccurate positioning of the image (see Redford page 3, discussing the prior art). Thus, instead of printing a detailed image (much less a multicolored registered

image), Redford uses a laser etching technique, which permits forming a sharp image without having to print a complex image. See, for example, page 4 ("permits creation of much more distinctive and unique marking than would otherwise be possible using solely offset printing techniques"), and page 10 ("provides a capability which is not possible using tablet ink-printing techniques.")

Certain modifications to claims 1, 2, 4, 9, 10 and 12 have been introduced responsive to the Examiner's comments in Paper No. 12 and Paper No. 17 and in an effort to clarify the record. For example, the Examiner alleged that "the claims are silent as to multicolor images" (Paper No. 12, page 4). As amended, instead of "multiple" images in registration, the claims recite multicolor images. The images are produced by multiple applications of coloring medium so that the images are in registration with one another. This limitation has not been addressed on the record. Applicants respectfully request consideration of this claim limitation, and to the extent that the Examiner relies on Ream to teach application of multicolor images to an edible substrate, considerations under 35 U.S.C. § 103 should include the motivation for applying that teaching to printing on non planar pieces transported and held in registration in individual recesses.

The motivation for combining multicolor printing (Ream) with non-planar pieces held in registration (Redford) is entirely lacking from the references. The motivational statement in the Office Action is that:

Redford can be relied on to teach that when one desires to process shaped edible pieces on which two coordinated processes are to be performed on the edible pieces in a registered or precise fashion, it was well established in the art to transport the pieces from one station to the other station

wherein a differential pressure is applied to maintain the pieces in a set position in a transporting recess.

(Paper No. 12, page 3). However, Redford does not actually say that. To the contrary, Redford discloses that offset printing of complex images on tablets results in inferior images, and that it is preferable therefore to print a background followed by etching the image. Moreover, while it is not disputed that the use of vacuum in connection with a drum is disclosed in the art, it is respectfully submitted that the use of vacuum to hold pieces in registration for printing multicolored images, is not disclosed or suggested.

Under 35 U.S.C. § 103(a), for a prima facie case of obviousness relying on a combination of references, the law requires a motivation in the prior art that would lead one of ordinary skill in the art to make the combination. The purpose of this requirement, repeatedly emphasized by the Federal Circuit in current decisions, is to prevent “hindsight” rejections; where every advancement in the art seems obvious once the problems are laid out and the solution set forth in the applicant’s specification is used as a blueprint. Thus, a rejection under 35 U.S.C. § 103 must find specific motivation for the combination made.

See In re Werner Kotzab, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000) (“[A] rejection cannot be predicated on the mere identification . . . of individual components of claimed limitations. Rather particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”)

In the present case, the Examiner relies on Redford to teach that it was known to hold a non-planar piece in registration between two "printing" stations. This is an inappropriate use of Redford, which clearly implies that printing of complex images on

such substrates cannot be readily accomplished with even one printing station.

Maintaining registration does not appear to be an issue with the planar substrates of Ream.

The secondary references do not overcome the deficiencies noted above.

Yamamoto does not disclose two printing stations, registration of pieces between printing stations or the printing of a multicolor registered image. Likewise, Yamamoto does not provide the motivation to utilize vacuum to hold pieces in registration between two printing stations. The Examiner correctly notes that Yamamoto teaches pockets or recesses for holding tablets, and that vacuum is applied through device 121 to hold the tablets during printing. However, the “air absorption device” 121 is stationary, and therefore once the piece passes the device 121, the pieces are not held in place at all, and certainly not in registering relationship between two printing stations. Yamamoto is discussed in the specification at page 6, and the characterization there is accurate. The assertion of the Examiner, that the teachings of Yamamoto would readily be applied to an application where multicolor registered images were formed at two printing stations is without foundation in Yamamoto or any other prior art of record.

Krubert, similar to Ream, teaches forming images on generally planar food items. There is no discussion of registration and this concept does not appear to be relevant to the Krubert disclosure, where the food items are disclosed as being placed individually and manually on a mandrel prior to printing (see Krubert col. 3, lines 45-46). As with Ream, nothing in the reference suggests modifications to accommodate a system where the pieces need to be held in registration utilizing recesses using vacuum.

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Respectfully submitted,



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